

REMARKS

Although an appeal was filed, the final rejection was withdrawn and a new Office Action was mailed September 10, 2004 with new references and new grounds of rejection. Applicant requests reconsideration of the application in view of the amendments and arguments addressing the new grounds of rejection.

Summary of Office Action

Claims 1-23 are pending.

Claim 12 was rejected under 35 U.S.C. § 112, second paragraph.

Claims 1, 2, 4, 6, 13, and 17 were rejected as being anticipated under 35 U.S.C. § 102 by U.S. Patent No. 5,887,133 of Zhou ("Zhou").

Claims 3 and 14 were rejected under 35 U.S.C. § 103 as being unpatentable over Zhou.

Claims 4-7, 10-13, 15-18, and 21-23 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,274,702 of Rosch ("Rosch") in view of Zhou.

Claims 8, 9, 19, and 20 were indicated as being allowable if rewritten.

A provisional obviousness-type double patenting rejection was made with respect to claims 1, 2, 4-9, 13, and 15-20.

Summary of Amendments

Claim 12 was amended. Applicant respectfully submits the amendment to claim 12 does not add new matter.

Response to 35 U.S.C. § 112 rejections

Claim 12 was rejected under 35 U.S.C. § 112 because of a lack of antecedent basis for the language “the linefeed control signals” at line 8 of the claim (as previously presented).

Claim 12 has been amended. Applicant submits that antecedent basis for the language “the control signal” is found at line 6 of claim 4 (which claim 12 depends from).

Applicant respectfully submits the rejections under 35 U.S.C. § 112 have been overcome.

Response to 35 U.S.C. § 102 rejections

Claims 1, 2, 4, 6, 13, and 17 were rejected under 35 U.S.C. § 102 as being anticipated by Zhou.

Applicant respectfully submits that claims 1, 2, 4, 6, 13, and 17 are not anticipated by Zhou. In particular, applicant submits that Zhou does not teach or suggest *an integrated circuit having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop, wherein the integrated circuit generates a control signal for a subscriber loop linefeed driver in response to the sensed signals, wherein the linefeed driver does not reside within a same integrated circuit.*

The Examiner has stated in part

Zhou discloses that the power feed control circuit (50) includes current sense inputs from the subscriber loop (49; column 4, lines 24-39) (i.e., having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop

(09/10/2004 Office Action, p. 3)

Applicant traverses the Examiner's characterization of Zhou. Battery feed circuit 38 has a battery feed circuit interface 23 for communicating with a battery feed control circuit 42. The battery feed interface circuit includes a first parameter or current sense output 40 and a second parameter input or voltage level control input 44. (Zhou, col. 4, lines 7-12). The battery feed circuit 38 senses the first parameter or current level of the electrical power on subscriber line 20 and provides the current sense signal at output 40 to the battery feed control circuit 42. (Zhou, col. 4, lines 23-32)

Applicant submits that Zhou's battery feed circuit does not provide either a sensed tip or a sensed ring signal to Zhou's battery feed control signal. Given the single connection node 39, it would appear that at best the battery feed circuit senses only one of the tip and ring lines. Even assuming arguendo that the battery feed circuit senses both the tip and ring lines, there is only a single, analog signal line 40 providing the "sensed current" to the battery feed control circuit 42. Although there is not sufficient disclosure of the definition of "sensed current", applicant can only hypothesize that the "sensed current" is likely a value calculated from the difference between the tip and ring lines (i.e., loop current). Such a signal is not representative of either a sensed tip signal nor a sensed ring signal nor is it possible to determine either the sensed ring signal or sensed tip signal from the loop current. Contrary to the Examiner's interpretation, there is no support for the assertion that Zhou's battery feed control circuit receives both a sensed tip signal and sensed ring signal.

Thus Zhou does not teach or suggest *an integrated circuit having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop, wherein the*

integrated circuit generates a control signal for a subscriber loop linefeed driver in response to the sensed signals, wherein the linefeed driver does not reside within a same integrated circuit.

In contrast, claim 1 includes the language:

1. *An integrated circuit package comprising:
an integrated circuit having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop, wherein the integrated circuit generates a control signal for a subscriber loop linefeed driver in response to the sensed signals, wherein the linefeed driver does not reside within a same integrated circuit.*

(Claim 1)(*emphasis added*)

Claim 13 similarly includes the language:

13. *An apparatus comprising:
an integrated circuit generating subscriber loop control signals in response to a sensed tip signal and a sensed ring signal of a subscriber loop, the sensed tip and ring signals received by the integrated circuit; and
a linefeed driver for driving a subscriber loop in accordance with the subscriber loop control signals, the linefeed driver providing the sensed tip and ring signals.*

(Claim 13)(*emphasis added*)

Similar arguments may be made with respect to claim 4. Applicant submits Zhou does *not* teach or suggest a battery feed circuit that provides sensed tip *and* ring signals to an integrated circuit that generates battery feed control signals for the battery feed circuit. Although Zhou's ring and tip signals *might* be sensed by a SLIC device 14 that might be an integrated circuit, it is not the same integrated circuit 12 that is generating the control signal 44.

In contrast claim 4 includes the language:

4. *A subscriber loop linefeed driver comprising:
sense circuitry providing a sensed tip signal and a sensed ring signal to an integrated circuit, wherein the sensed tip and ring signals correspond to a tip current and a ring current of the subscriber loop; and*

power circuitry for providing battery feed to a ring node and a tip node of a subscriber loop in accordance with a control signal generated by the integrated circuit in response to the sensed tip and ring signals.

(Claim 4, as amended)(*emphasis added*)

Thus applicant submits claims 1, 4, and 13 are not anticipated by Zhou. Given that claims 2-3 depend from claim 1; claims 5-12 depend from claim 4; and claims 14-23 depend from claim 13; applicant submits claims 2-3, 5-12, and 14-23 are likewise not anticipated by Zhou.

Applicant respectfully submits the rejections under 35 U.S.C. § 102 have been overcome.

Response to 35 U.S.C. § 103 rejections

Claims 3 and 14 were rejected as being unpatentable over Zhou. Claims 4-7, 10-13, 15-18, and 21-23 were rejected as being unpatentable over Rosch in view of Zhou.

For a detailed discussion of Zhou, the Examiner is referred to the same arguments presented above with respect to overcoming the 35 U.S.C. § 102 rejections. Applicant submits that Rosch fails to make up for the deficiencies of Zhou.

Rosch includes a disclosure of a subscriber line interface circuit having a sense network (Rosch, Fig. 2) and a line drive circuit (Rosch, Fig. 3). The line drive circuit is coupled to the tip and ring wires of the telephone line via the sensing network. The sensing network senses the tip and ring lines to determine the subscriber line differential current (ID), loop current (IL), common mode voltage (VCM), and common mode current (ICM). A digital control circuit

within the linefeed driver monitors the sensed IL, ICM, and VCM and adapts the line interface circuitry. (Rosch, col. 11, lines 7-16, see also Fig. 3). To the extent Rosch can be analogized to applicant's apparatus, applicant notes that none of Rosch's IL, ICM, VCM corresponds to either the sensed tip or the sensed ring line.

Thus none of the cited references, alone or combined, teaches or discloses *an integrated circuit having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop, wherein the integrated circuit generates a control signal for a subscriber loop linefeed driver in response to the sensed signals, wherein the linefeed driver does not reside within a same integrated circuit.*

In contrast, claim 1 includes the language:

1. *An integrated circuit package comprising:
an integrated circuit having sense inputs for a sensed tip signal and a sensed ring signal of a subscriber loop, wherein the integrated circuit generates a control signal for a subscriber loop linefeed driver in response to the sensed signals, wherein the linefeed driver does not reside within a same integrated circuit.*

(Claim 1)(*emphasis added*)

Claim 13 similarly includes the language:

13. *An apparatus comprising:
an integrated circuit generating subscriber loop control signals in response to a sensed tip signal and a sensed ring signal of a subscriber loop, the sensed tip and ring signals received by the integrated circuit; and
a linefeed driver for driving a subscriber loop in accordance with the subscriber loop control signals, the linefeed driver providing the sensed tip and ring signals.*

(Claim 13)(*emphasis added*)

Similar arguments may be made with respect to claim 4. Applicant submits Zhou does *not* teach or suggest a battery feed circuit that provides

sensed tip *and* ring signals to an integrated circuit that generates battery feed control signals for the battery feed circuit. Although Zhou's ring and tip signals *might* be sensed by a SLIC device 14 that might be an integrated circuit, it is not the same integrated circuit 12 that is generating the control signal 44.

In contrast claim 4 includes the language:

4. A subscriber loop linefeed driver comprising:
sense circuitry providing a sensed tip signal and a sensed ring signal to an integrated circuit, wherein the sensed tip and ring signals correspond to a tip current and a ring current of the subscriber loop; and
power circuitry for providing battery feed to a ring node and a tip node of a subscriber loop in accordance with a control signal generated by the integrated circuit in response to the sensed tip and ring signals.

(Claim 4, as amended)(*emphasis added*)

Thus applicant submits claims 1, 4, and 13 are patentable under 35 U.S.C. § 103 over the cited references. Given that claims 2-3 depend from claim 1; claims 5-12 depend from claim 4; and claims 14-23 depend from claim 13; applicant submits claims 2-3, 5-12, and 14-23 are likewise patentable over the cited references.

Applicant respectfully submits the rejections under 35 U.S.C. § 103 have been overcome.

Response to Terminal Disclaimer Requirement

The Examiner has made a provisional double patenting rejection of claims 1, 2, 4-9, 13, and 15-20 of the present application as being unpatentable over claims 14 and 20 of copending application 09/608,743. Applicant notes that neither application has been published, allowed, or issued.

The Examiner has stated that application '743 discloses in claims 14 and 20 circuitry that is recited verbatim in claims 7-9 and 18-20 of the present application. The Examiner further states that the only difference between claims 14 and 20 of '743 and the current application is that claims 7-9 and 18-20 include limitations from their parent claims and concludes that claims 14 and 20 of '743 anticipate all limitations of claims 4, 7-9, 13, 15, and 18-20 of the current application with the exception of "sense circuitry".

Applicant traverses the Examiners rejection. Applicant believes the Examiner appears to be making a "domination" argument rather than a "double patenting" argument. Domination is not inherently a basis for a double patenting rejection double patenting rejection. *In re Kaplan*, 789 F.2d 1574, 1577-78, 229 USPQ 678, 681 (Fed. Cir. 1986); and *In re Sarrett*, 327 F.2d 1005, 1014-15, 140 USPQ 474, 482 (CCPA 1964).

Obviousness-type double patenting requires rejection of an application claim when the *claimed subject matter is not patentably distinct from the subject matter claimed in a commonly owned patent when the issuance of a second patent would provide unjustified extension of the term of the right to exclude granted by a patent*. See *Eli Lilly & Co. v. Barr Labs., Inc.*, 251 F.3d 955, 58 USPQ2d 1865 (Fed. Cir. 2001).

Applicant notes that the present application could not possibly extend the term of the right to exclude of the other patent application given the earlier filing date of the present application and the measurement of the fixed patent term from this earlier filing date. Thus issuance of the present application cannot provide an extension of the term of the right to exclude granted by a patent on

the '743 application even if the present application issued after the '743 application.

Additionally, the Examiner should indicate whether he intends to use a one-way test or a two-way obviousness test. This application pended for over 3 years before the first Office Action. Despite applicant's earnest efforts to bring the matter to conclusion through an appeal, prosecution was re-opened by the Office without addressing the issues raised in the appeal brief. Although applicant does not believe a double patenting situation exists in the present application, applicant respectfully submits that delay by the Patent Office suggests that the appropriate analysis should be a two way obviousness test.

Although the Examiner has noted that claims 7-9, 18-20 of the present application include limitations from their parent claims, the Examiner seems to have ignored that claims 14 and 20 of the '743 application similarly include limitations from their parent claims, 9 and 15, respectively.

The Examiner is not free to ignore the limitations imposed by the parent claims of the reference application in performing the analysis for a double-patenting rejection. The fact that dependent claims of the two applications may have identical language (without regard to the language incorporated by dependency) is not dispositive. If the Examiner is going to compare dependent claims between the applications, the Examiner must include all the limitations imposed by the respective parent claims in each application for this analysis.

Claims 14 and 20 of the '743 application depend from claims 9 and 15, respectively. At the time of submitting the present amendment, claims 9 and 15 of the pending '743 application were as follows:

9. A subscriber line interface circuit apparatus, comprising:
a first circuit for coupling a received outgoing audio signal to a subscriber line, *wherein the first circuit couples the received outgoing audio signal to the subscriber line through a common base isolation stage*, wherein the common base isolation stage provides d.c. isolation from the subscriber line for a source of the audio signal.

(‘743 Application, claim 9)

15. A subscriber line interface circuit apparatus, comprising:
a signal processor providing an outgoing audio signal; and
a linefeed driver coupled to receive the outgoing audio signal, *wherein the linefeed driver couples the received outgoing audio signal to a subscriber line through a common base isolation stage*, wherein the common base isolation stage provides d.c. isolation from the subscriber line for the signal processor.

(‘743 Application, claim 15)

Applicant respectfully submits that no such language appears in the pertinent parent or dependent claims of the present application. Is the Examiner proposing a “domination” argument (i.e., that the ‘743 application is domination by the present application claims?) Applicant also notes that the Examiner appears to be relying upon material from the disclosure rather than the *claims* of the ‘743 application. The one way test examines the present application in the context of the *claims of the reference application*, not vice-versa and not the disclosure.

In addition to the comparison performed above, a two-way test examines the “obviousness” of the claims of the reference application in view of the present application. Applicant notes that the cited claims of the ‘743 application include coupling an outgoing audio signal to the subscriber line through a common base isolation stage. No such language is found in the claims of the present application. Even under a one way test, the Examiner seems to be

suggesting that omitting any reference to the manner in which the audio signal is coupled to the subscriber line in the present application is an "obvious variation" over the subsequently filed reference application.

Applicant respectfully submits that both the one-way and two-way test for obviousness fail. Accordingly no provisional double patenting rejection should be made against the present application. Applicant respectfully submits the non-statutory double patenting rejection has been overcome.

Conclusion

In view of the amendments and arguments presented above, applicant respectfully submits the applicable rejections and objections have been overcome. Accordingly, claims 1-23 should be found to be in condition for allowance.

If there are any issues that can be resolved by telephone conference, the Examiner is respectfully requested to contact the undersigned at (512) 858-9910.

Respectfully submitted,

Date February 14, 2005

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